

REMARKS

Claims 1-3, 6, 8, 9 and 23-27 are currently pending in this application. Claims 1 and 23 have been amended to more particularly point out Applicants' invention. No new matter has been added to this application.

Rejection of Claims 23 and 26-27 under 35 U.S.C. § 103 (a)

The Examiner has rejected claims 23 and 26-27 under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent Application No. 2001/0047373 A1 (Jones) in view of U.S. Patent No. 6,650,343 (Fujita). The Examiner correctly notes that Jones does not teach or disclose analyzing a portable document format document to determine page layouts for each page or identifying a structure of each page layout. The Examiner contends that Fujita teaches these limitations. The Examiner argues that it would have been obvious to a person of ordinary skill in the art to combine the teaching of Fujita in the Jones device. Applicants respectfully traverse the rejection.

Applicants' invention is directed to an automated method for locating hotspots in a PDF file, and for creating cross-referenced AIUs in hypermedia documents. The PDF files are mixed mode documents, e.g., a mixture of text and a variety of different types of images such as black and white, grayscale and color. However, as is well known in the art, PDF documents inherently do not have any structure and are organized as pure image documents. As such, while a PDF document might contain text or graphics, the document does not include any context information and therefore can not be searched for these types of structures.

As recited in amended claim 23, the present invention analyzes the PDF file to establish the page layout of each page associated with the file. Also identified are text and non-text portions of a document. Because a PDF file can consist internally of an image file, without such analysis it is not possible to determine text portions from non-text portions, such as images. The present

invention locates text and non-text areas in the document and applies different processing methods to each type of area. Context is determined for each area of interest and stored in structured manner that follows a predetermined syntax and grammar that allows the method to refer to that context while creating automatic hyperlinks between different documents and media types. Effectively, the present invention is a tool for providing structure to a PDF document so that it can be searched much like an HTML document.

Jones discloses a computerized information display system that extracts text data, lists of keywords from an electronic document. The goal of the Jones invention is to index and visualize electronic documents. In the present invention, the PDF document is being analyzed to create an infrastructure (i.e., page layout) for linking between the document and even between segments of the document. This is made possible by associating a layout and structure to the document. Jones does not create a structure for its electronic documents, but rather presumes that a structure already exists. Jones uses that existing structure to manipulate the document. The present invention is in fact a precursor to Jones in that the present invention defines the structure of the document which can then be used to manipulate the documents. As such, Applicants respectfully submit that Jones does not teach or disclose Applicants' invention.

Fujita discloses an electronic information displaying method that is used to browse electronic information which includes embedded link information such as hypertext. As with Jones, Fujita also presumes that the document being searched contained structure such as hyperlinks. As stated above, the present invention analyzes the PDF document to create an infrastructure for the document. Applicants submit that the combination of Jones and Fujita does not teach or disclose Applicants' invention as claimed. Neither Jones nor Fujita, whether taken alone or in combination, teach or disclose establishing page layouts for an unstructured PDF document or creating structure for each page

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layout. Applicants respectfully request that the rejection of claims 23 and 26-27 under 35 U.S.C. § 103 (a) be withdrawn.

Rejection of claims 24 and 25 under 35 U.S.C. § 103 (a)

The Examiner has rejected claims 24 and 25 under 35 U.S.C. § 103 (a) as being unpatentable over Jones in view of U.S. Patent No. 6,344,906 B1 (Gatto). The Examiner correctly notes that Jones does not teach or disclose differentiating color image content from black and white image content. The Examiner contends that Gatto teaches differentiating color image content from black and white image content. The Examiner argues that it would have been obvious to combine the differentiation step of Gatto with the Jones device. Applicants respectfully traverse the rejection.

Neither Jones nor Gatto teach or disclose establishing page layouts for an unstructured PDF document or creating structure for each page layout as recited in independent claim 23 from which both claims 24 and 25 depend. As such, Applicants respectfully request that the rejection of claims 24 and 25 under 35 U.S.C. § 103 (a) be withdrawn

Rejection of Claims 1-3, 6 and 8-9 under 35 U.S.C. § 103 (a)

The Examiner has rejected claims 1-3, 6 and 8-9 under 35 U.S.C. § 103 (a) as being unpatentable over Jones in view of Gatto and further in view of Fujita. The Examiner correctly notes that Jones does not teach or disclose a black and white image processor that includes a pixel smearing component and an image filtering component. The Examiner contends that Gatto discloses a black and white image processor that includes a pixel smearing component and an image filtering component. The Examiner further contends that Fujita teaches a page layout analyzer to determine page layouts for a multimedia file. The Examiner argues that it would have been obvious to one of ordinary skill in the

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art to modify Jones to include the image processor of Gatto and the page layout analyzer of Fujita. Applicants respectfully traverse the rejection.

Gatto discloses a circuit implemented on a single piece of silicon that is used as a scanner controller. Applicants submit that Gatto discloses hardware for scanning technologies. The present invention is directed to analyzing and determining document structure of a multimedia data file. Applicants have amended claim 1 to include a page layout analyzer for determining page layout for each page of the multimedia data file. Applicants respectfully submit that Gatto does not teach or disclose a page layout analyzer. Applicants further submit that Fujita does not teach a page layout analyzer as claimed for the reasons stated above. Applicants submit that neither Jones nor Gatto nor Fujita, whether taken alone or in combination, teach or disclose Applicants' invention as claimed. Applicants request that the rejection of claims 1-3, 6 and 8-9 under 35 U.S.C. § 103 (a) be withdrawn.

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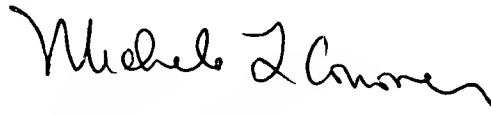
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Conclusion

Applicants respectfully submit that claims 1-3, 6, 8, 9 and 23-27, as amended, are in condition for allowance and request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the undersigned should he have any questions in this matter.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michele L. Conover". The signature is fluid and cursive, with a long horizontal stroke at the end.

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